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EXAMINER

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**GROUP 1600**

**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 09/692,749  
Filing Date: October 20, 2000  
Appellant(s): DECOSTER ET AL.

DEBORAH M. HERZFELD  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed on March 8, 2005.

**(1) *Real Party in Interest***

*244*

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) *Grouping of Claims***

The rejection of claims 1-112 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

**(8) *Claims Appealed***

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) *Prior Art of Record***

US 5,650,383	DUBIEF et al.	07-1997
US 6,039,936	RESTLE et al.	03-2000
US 5,063,051	GROLLIER et al.	01-2000
US 4,957,732	GROLLIER et al.	09-1990
US 6,011,126	DUBIEF et al.	11-1991
US 5,948,739	INMAN	09-1999

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

**A. Claims 1-31, 38-67, and 94-112 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalle et al. (EP 0874017 A2) (“Dalle”) in view of Dubief et al. (U.S. Pat. No. 5,650,383) (“Dubief (‘383)”) and Restle et al. (U.S. Pat. No. 6,039,936) (“Restle”).**

Dalle teaches silicone- in- water emulsions comprising the polysiloxanes of formula (I) and at least one surfactant among anionic, nonionic, amphoteric, and cationic surfactants. The use of the emulsion in hair or skin washing of treatment applications is also disclosed. See p. 5, lines 47 – 57; instant claims 96-108. The reference teaches using 9 parts by weight of polysiloxane in making the silicone-in-water emulsion. See Examples 1-3 on p. 6; instant claims 13 and 14. Examiner views that the dimethylvinylsiloxy terminated polydimethylsiloxanes used in Examples 1-3

meets instant claim 110. The particle size of the silicone copolymer is said to be in the range of 0.3 – 100  $\mu\text{m}$ . See p. 5, lines 35-41. See instant claims 15-16. Formulating the composition with additives including perfume, polymers and moisturizing agents is disclosed. See p. 4, line 57- p. 5, line 1; p. 6, lines 2- 4; instant claim 94. Dalle et al. teaches the use of quaternary ammonium hydroxides and their corresponding salts in formulating the silicone-in-water emulsion. See p. 4, lines 26 – 37; instant claims 41-67. The reference teaches that the invention is applicable either in hair shampoo or conditioning composition. See p. 5, lines 51-52. See instant claims 111 and 112.

Dalle fails to teach additionally using the insoluble silicones as recited in the instant claims.

Dubief ('383) teaches composition for washing and rinsing hair, which comprise water-insoluble silicone in an aqueous medium and surfactants. The polyorganosiloxanes in claims 15 – 31 and 38 are disclosed in col. 2, line 66 – col. 6, line 8. polydimethylsiloxanes are particularly mentioned. See col. 3, lines 46 – 61; instant claim 109. The use of the silicone in the amount of 0.1 – 30% by weight is also disclosed, which meets claims 39 and 40, col. 6 lines 5 – 9. The reference teaches that using silicones in hair washing composition is well known. See col. 1, lines 21-24. Silicones are said to provide shine, softness, and lightness on hair.

Restle et al. teach an oil-in-water emulsion comprising a silicone surfactant and at least one cationic amphiphilic lipid that is a quaternary ammonium salt of formulas (IV) – (VII) and their constituents in the instant claims 41 - 67. See col. 2, line 59 – col. 6, line 38. Using 1-60% of the cationic amphiphilic lipids by weight is also disclosed,

which meets claims 65 – 67. See col. 6, lines 42 – 50. The reference teaches that the composition, when used in hair treatment products, renders the hair softness and gloss without a greasy feel or appearance, and disentangles easily. See col. 1, lines 24 – 48.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of Dalle by adding an additional silicone disclosed in Dubief, as motivated by the teaching therein, because of the expectation to have successfully produced hair care composition that enhances shine, softness, lightness and disentanglement of hair. It would also have been obvious to the skilled artisan to have added the quaternary ammonium salt, as motivated by Restle et al., because of the expectation to have successfully produced a hair care composition which leaves the hair soft and gloss with no greasy feel or appearances and disentangles the hair easily.

All components are known in the art. Nothing unexpected or nonobvious is seen in combining old and well-known compounds for the same use.

**B. Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dalle, Dubief ('383), and Restle, as applied to claims 1-31, 38-67, 94-112 above, and further in view of Grollier et al. (U.S. Pat. No. 5,063,051) ("Grollier").**

Dalle, Dubief ('383), and Grollier are discussed above. The combined references fail to teach the polysiloxanes in claim 32.

Grollier et al. ('051) disclose a cosmetic hair treatment composition comprising a polyorganosiloxane containing a hydroalkyl functional group of formula (IX) of the instant claim 32 and its constituents. See abstract. The reference teaches that the

composition, in its application on hair, enhances shine, lightness, and volume. See col. 1, lines 22 – 26.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of the combined references by adding the polyorganosiloxane of formula (IX), as motivated by Grollier, because of the expectation to have successfully produced a hair treatment composition that provides shine, lightness, and volume to the hair.

**C. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dalle, Dubief, Restle, and Grollier ('051) as applied to claims 1-32, 38-67, 94-112 above, and further in view of Grollier et al. (U.S. Pat. No. 4,957,732) ("Grollier ('732)").**

Dalle, Dubief ('383), Restle, and Grollier ('051) are discussed above. The combined references lack the teaching of using the polyorganosiloxane of claim 33.

Grollier ('732) describe shaving composition comprising polyorgano-siloxane of formula (X) and in claim 33 and its constituents. See col. 1, line 54 – col. 2, line 25. The reference teaches that the use of the polyorganosiloxanes in the invention exhibited substantial improvement to be obtained in the smoothness and softness of these compositions, preserves the quality and stability of the composition while emptying from aerosol container, and easy rinsing of hair with water, and leaving skin clean and satiny. See col. 1, lines 28 – 45.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of the combined references by

adding the polyorganosiloxane disclosed in Grollier ('732), as motivated by Grollier ('732), because of the expectation to have successfully produced an aerosol hair care or shaving composition that is smooth in feel and easy to rinse, retains the quality and stability while being dispensed from the container, and leaves the skin clean and satiny.

**D. Claim 34 - 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalle, Dubief ('383), Restle, Grollier ('051), and ('732) as applied to claims 1-33, 38-67, and 94-112 above, and further in view of Dubief et al. (U.S. Pat. No. 6,011,126) ("Dubief ('126)").**

Dalle, Dubief ('383), Restle, Grollier ('051), and ('732), discussed above, fail to teach the grafted polymer of instant claims 34-37.

Dubief ('126) discloses a cosmetic composition for hair treatment, which comprises a polymer grafted with a non-silicone organic skeleton grafted with polysiloxane monomers, or polysiloxane polymer grafted with non-silicone organic monomers, which meets claims 34 and 35. See abstract. The polysiloxane macromers of formula (X) in the instant claim 36 are disclosed in col. 4, lines 16 – 33. Claim 37 is rejected by the disclosure in col. 6, line 66 – col. 7, line 8. The reference teaches that the use of these polymers in hair product enhances the styling properties, col. 1, lines 30 - 40.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of the combined references by adding the grafted polysiloxane polymer in Dubief ('126), as motivated by the teaching

therein, because of the expectation to have successfully produced a hair care composition with enhanced hair styling properties.

**E. Claims 68-93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dalle, Restle, Dubief ('383), ('126), Grollier ('051), and ('732), as applied to claims 1-67 and 94-112 above, and further in view of Inman (U.S. Pat. No. 5,948,739).**

Dalle, Restle, Dubief ('383), ('126), Grollier ('051), and ('732) are discussed above. While Dubief ('383) teaches to use the deterative surface-active agents of instant claims, the combined references do not provide combining the surface-active agents.

Inman teaches aqueous hair conditioning shampoo compositions that contain silicone conditioning agent and a deterative surfactant component, which is a combination of anionic surfactant and amphoteric, zwitterionic, or other non-ionic surfactants. See col. 2, lines 31 – 61; col. 3, lines 1 – 17. The anionic surfactants of instant claims 68 – 79 are disclosed in col. 4, line 11 – col. 6, line 14. The nonionic surfactants of claims 70-83 are described in col. 6, line 14 - col. 8, line 44. The amphoteric surfactants of claims 84 – 88 and 91 – 93 are described in col. 8, line 46 - col. 11, line 20. Claims 89 – 91 are met by the disclosure in col. 11, lines 21 – 28.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the composition of the combined references by adding the surfactants as taught by Inman because of the expectation to have successfully produced a hair conditioning shampoo composition with a good cleaning property.

**(11) Response to Argument**

Examiner respectfully submits that the rejections above should be maintained since the Office has properly established a prima facie case of obviousness under 35 U.S.C. § 103 (a), and applicants have not provided sufficient evidence to overcome the rejections.

**A. Rejection of Claims 1-31, 38-67, and 94-12 in view of Dalle/Dubief '383/Restle references is proper.**

**1). One of ordinary skilled in the art would have been motivated to combine the teachings of the references, and applicants' argument that Dubief '383 "teaches away" from combining with the silicone-in-water emulsion of Dalle is unpersuasive.**

Applicants argue that Dubief '383 teaches away from the addition of an insoluble silicone. Dubief suggests combining its silicones with other cosmetic additives "whose effect is to improve the properties of keratinous matter, in particular the cosmetic properties of hair" on condition that the stability of the composition is maintained. See Dubief, p. 7, lines 56-62. The reference mentions using "silicones which are soluble in the mixture". Examiner respectfully submits that the reference specifically provides here the motivation for a skilled artisan to combine the Dubief water-insoluble silicones with other hair conditioning silicones, such as that of Dalle, with the clear guideline that the stability of the final composition should be maintained.

The "mixture" mentioned in the Dubief reference there is viewed as the final composition comprising the water-insoluble silicone, i.e., the conditioning shampoo end products in Examples which comprise aqueous continuous phase. Examiner views that there is no teaching away from incorporating in to the **mixture** of the Dubief

compositions the silicone-in-water emulsion of Dalle, which is in the form of silicone dispersion in a continuous water phase with the aid of cationic surfactants.

In fact, the present rejection is based on the notion that incorporating the Dubief silicones to the hair shampoo or conditioning compositions taught in Dalle would have been obvious to a skilled artisan. Dalle teaches that its silicone-in-water emulsion is "useful as a delivery system for oil and water soluble substances". See p. 5, lines 54-55. Thus a skilled artisan would have known that, given the teaching of the beneficial hair conditioning property of the Dubief water-insoluble silicones, there is a reasonable expectation of successfully producing hair conditioning compositions by incorporating the water-insoluble silicones to hair compositions comprising the silicone-in-water emulsion of Dalle.

Applicants also assert that each of Dalle and Dubief references teaches the "need for one silicone" only. The argument is erroneous because the references do not teach or suggest using the silicones used in the each invention only; in fact, each reference teaches combining with other ingredients to enhance the property of its final products.

The specific motivation to combine the Dalle silicone copolymer with the Dubief silicones is found in the combined teachings of the references in expectation of successfully producing an enhanced hair cosmetic composition because i) both Dalle and Dubief silicones have hair conditioning properties; ii) Dalle teaches to incorporate conventional cosmetic additives to formulate the final products taught in page 5, line 47 – p. 6, line 7; and iii) Dubief teaches to combine its water insoluble silicones with other agents which improves hair cosmetic properties. The skilled artisan would have had a

reasonable expectation of success because Dalle teaches that its silicone-in-water emulsion is used as a delivery system for both oil and water soluble substances. Thus, the obviousness rejection in view of the collective teachings of the cited references is proper.

**2) The obviousness rejection should be maintained also in view of In re Kerkhoven.**

Applicants argue that In re Kerkhoven is distinct from the present case, allegedly because the end product in Kerkhoven was the same as the combined ingredients, whereas in the present case, individual components are added to make a final product. See 626 F.2d 846, 205 U.S.P.Q. 1069 (C.C.P.A. 1980). Examiner respectfully submits that this argument is unpersuasive.

The motivation the Kerkhoven court found in the precedent case not that a skilled artisan would combine two detergents in the expectation of a successful reaction between the two ingredients, as applicants describe in the present case. The court held that the idea for combining compounds each of which is known to be useful for the same purpose, in order to form a composition which is to be used for the same purpose, flows logically from their having been used individually in the prior art. See Id at 849. The rationale of the court was not that the ingredients and the final product have to be merely the same kind; rather, the court looked to the known *utility* of the components and the final product. Pursuant to the holding of the Kerkhoven case, it is prima facie obvious to combine two silicone ingredients well known for hair conditioning properties to make a hair conditioning composition.

**3). The declaration filed under 37 CFR 1.132 on March 4, 2004 is insufficient to overcome the obviousness rejections of claims 1-112.**

**(a) Applicants have failed to clearly indicate how the compared sample in the declaration represent the closest prior art.**

Applicants assert that the examiner “objectively misread and subjectively undervalued the submission”. Examiner respectfully points out that applicants had initial burden of clearly indicating how the data in the declaration represents the claimed invention and the closest prior art. It is well settled in patent law that, in submitting evidence asserted to establish unobvious results, there is burden on an applicant to indicate how the examples asserted to represent the claimed invention are considered to relate to the examples intended to the examples asserted to represent the prior art and, particularly, to indicate how those latter examples do represent the closest prior art. See Ex parte Gelle, 22 U.S.P.Q. 2d 1318, 1319 (Bd. Pat. App. & Inter. 1992), quoting In re Borkowski, 595 F.2d 713, 184 U.S.P.Q. 29 (C.C.P.A. 1974).

In explaining the comparison, the declarant states in page 2, “Composition A was prepared according to the present invention, containing a silicone copolymer, a cationic surfactant, and an additional silicone that is insoluble. Composition B was prepared in accordance with the cited prior art, containing a water soluble silicone”. There is no indication which “prior art” is referred to here. Examiner’s inquiry as to how the data represents the closest prior art, was repeatedly ignored during the prosecution. The Dubief invention employs water-insoluble silicones, thus prompting the question by the examiner whether Composition A contains any of the Dubief inventions. Applicants’ response, “Dubief ‘383 does not teach an additional insoluble silicone” is vague and

does not in any way admit or deny whether any of the insoluble silicones in Dubief '383 were used in the samples. In fact, applicant's specification, applicants admit that DC-1997 cationic Emulsion by the company Dow Corning is taught in Dalle reference (EP-A-874017). See spec. p. 5, bridging par. It turns out that DC200 in Composition A is in fact taught by the Dubief '383 reference. Thus applicants' statement "Example A the invention comprised an insoluble silicone of the invention, while the comparative example representing Dubief, Example B, comprised one gram of a water soluble silicone" is erroneous. Contrary to applicants' assertion, Abilquat 3474, the water soluble silicone used in Composition B, is nowhere taught by the Dubief '383 reference.

Examiner respectfully submits that the declaration fails to sufficiently explain how the examples represent the claimed invention and the closest prior art. The comparison data in the declaration merely shows that Composition A, which in examiner view would have been an obvious combination to a skilled artisan, produces hair disentanglement property to some degree, while whether this property is an unexpected or nonobvious result is not clearly demonstrated, which will be discussed below.

**(b) Applicants' allegation of unexpected result is not commensurate with the scope of the claim.**

The court in Ex parte Gelle also held that the evidence relied upon also should be reasonably commensurate in scope with the subject matter claimed and illustrate the claimed subject matter "as a class" relative to the prior art subject matter "as a class." See *Id*, quoting In re Susi, 440 F. 2d 442, 169 U.S.P.Q. 423 (C.C.P.A. 1971). In the present case, while the base claims cover entire class of "insoluble silicone" added to

the Dalle silicone copolymer, the comparison test in the declaration used only one single type of each of water insoluble silicone and water soluble silicone.

**(c) The comparison test in the declaration does not show statistical and practical significance of the difference between the tested samples.**

Ten samples of hair were tested and Compositions A and B scored the average of 3.3 and 2.7, respectively. Examiner is not convinced that this difference amounts to “unexpected” and “surprising” results that overcomes the prima face case of obviousness. The evidence relied upon should establish “that the differences in results are in fact unexpected and unobvious and of both statistical and practical significance.” See *Id*, quoting *In re Merck & Co.*, 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986) (Mere conclusions in appellants' brief that the claimed polymer had an unexpectedly increased impact strength “are not entitled to the weight of conclusions accompanying the evidence, either in the specification or in a declaration.”).

In this case, firstly, the data is not statistically and practically significant because, while the declarant states that ten samples of hair were tested for disentanglement by “skilled persons”, no where in the declaration the number of the skilled persons in the panel or the comparison result by each skilled person in the panel.

Secondly, the declaration does not show the actual affects of each of DC200 and Abilquat 3474 in combination with DC-1997 silicone (the Dalle invention). There is no evidence as to how DC-1997 silicone alone would have performed in hair disentanglement test. It cannot be determined how applicant's invention is unexpected and nonobvious result over the combined teachings of the prior arts.

Thirdly, while Composition A is said to produce better results than Composition B on average, different compounds are expected to vary in some degree. Both DC200 and Abilquat 3474 appear to have produced some hair disentanglement properties. The facts do not support the applicants' allegation that the difference between the average scores of Compositions A and B is really unexpected and surprising.

Thus, examiner asserts that the obviousness rejection made in view of the combined teachings of the Dalle/Dubief '383/Restle was properly made and should be maintained as applicants' rebuttal arguments are not persuasive and the evidence of the record is not sufficient to rebut the prima facie case of obviousness.

**B. Rejection of Claim 32 in view of Dalle/Dubief '383/Restle combination and further in view of Grollier '051 is proper.**

The only rebuttal argument applicants presented here is that Grollier '051 does not cure the alleged deficiencies of the primary rejection made in view of Dalle/Dubief'383/Restle combination. As discussed above, the primary rejection should be maintained and thus applicants' argument is moot.

**C. Rejection of Claim 33 in view of Dalle/Dubief '383/ Restle/Grollier '051 and further in view of Grollier '732 is proper.**

The rejection should be maintained for an analogous reason as stated above. The only rebuttal argument applicants presented here is that Grollier '732 does not cure the alleged deficiencies of the primary rejection made in view of Dalle/Dubief'383/Restle combination. As discussed above, the primary rejection should be maintained and thus applicants' argument here is moot.

**D. Rejection of Claims 34-37 in view of Dalle/Dubief '383/Restle/Grollier '051/Grollier '732/ and further in view of Dubief '126 is proper.**

The rejection should be maintained for an analogous reason as stated above.

The only rebuttal argument applicants presented here is that Dubief '126 does not cure the alleged deficiencies of the primary rejection made in view of Dalle/Dubief'383/Restle combination. As discussed above, the primary rejection should be maintained and thus applicants' argument here is moot.


**E. Rejection of Claims 68-93 in view of Dalle/Dubief '383/Restle/Grollier '051/Grollier '732/Dubief '126/ and further in view of Inman is proper.**

The rejection should be maintained for an analogous reason as stated above.

The only rebuttal argument applicants presented here is that Dubief '126 does not cure the alleged deficiencies of the primary rejection made in view of Dalle/Dubief '383/Restle combination. As discussed above, the primary rejection should be maintained and thus applicants' argument here is moot.

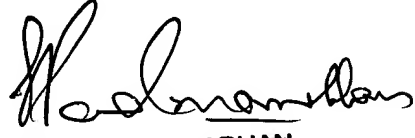
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

  
Gina Yu  
Patent Examiner  
May 27, 2005

Conferees

  
**SHENGJUN WANG**  
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